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# The Virtual Campus: Technology and Reform in Higher Education. ERIC Digest.

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The virtual campus is a metaphor for the electronic teaching, learning, and research environment created by the convergence of powerful new information and instructional technologies. Today there is a pressing call for technology to provide expanded higher education opportunities to a very wide spectrum of present and potential clientele.

### WHAT ARE THE IMPLICATIONS OF TEACHING ON THE VIRTUAL CAMPUS?

A paradigmatic shift, from a professor-centered to a student-centered system of learning, has particular implications for the profession of teaching. One implication is a recommitment to creating an ideal learning environment for students, employing new technologies to address variances from the ideal. A second major implication for faculty is a shift from traditional to new roles and classroom responsibilities. The transition from lecturer to facilitator will not happen overnight and must be accompanied by institutional and professional commitment to incorporate research findings into professional development activities. Beyond merely providing technical training in the latest (and soon obsolete) technology, professional development activities will need to focus on crucial classroom variables that will ultimately determine the level of productive interaction and intellectual engagement apropos to the individual and group. (Barr and Tagg 1995).

### HOW WILL CLASSROOM LEARNING BE DIFFERENT?

Systemic reform has brought about a number of changes to postsecondary education, none more significant than what students learn and how they learn it. With time and distance effectively removed as constraints, colleges and universities are serving a more heterogeneous clientele with diverse educational backgrounds and needs. As Plater (1994) suggests, "these new century students confront us with the possibility that a postsecondary educational system designed to manage enrollment growth by weeding out unprepared or uncommitted students may no longer be appropriate or economically defensible" (p. 9).

Perhaps the most telling difference between learning in the traditional and virtual modes is the kind and extent of interaction. In the traditional classroom, the potential for

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learner-instructor and learner-learner is very high, but instructors have largely ignored this mandate for change and continue to employ the lecture mode as the predominant method of instruction. In the virtual classroom, on the other hand, technology supports collaborative learning, heterogeneous groupings, problem-solving and higher order thinking skills--educational processes that a lecture format cannot facilitate.

#### WHAT WILL BE THE NEW SCHOLARLY AGENDA FOR RESEARCH?

Today's American higher education establishment is an aggregate of three functions=teaching, service, and research. Critics of American higher education today contend that especially since the Second World War faculty have placed emphasis on the research function to the detriment of teaching and service at a time when our culture demands the preparation of workers for a competitive and volatile economy. Voices from within the academy have proposed a reconceptualization of scholarship, one that expands the practice of present-day research to include integration, application, and teaching (Boyer 1990).

New forms of scholarship may necessitate a new epistemology. The scholarships of integration, application, and teaching entail "action" research that may fall outside the boundaries of prevailing institutional epistemology. College and universities must become learning organizations that foster originality and innovation.

## CAN TECHNOLOGY HELP TO CREATE A CULTURE OF QUALITY?

Calls from external constituencies for academic institutions to demonstrate greater accountability and systemic improvement have prompted many colleges and universities to adopt the principles of Total Quality Management (TQM). Less a set of specific tools than an underlying philosophy, TQM has been distilled by Chaffee and Sherr (1992) into three simple ideas: defining quality in terms of customer needs, bettering work performance, and improving administration. If TQM is the underlying philosophy, Information Resource Management is the facilitator of broad access to information.

In the academic sphere, TQM faces stiff faculty resistance. Many faculty see TQM as "another management fad from the evil empire of business" (Chaffee and Sherr 1992, p. 93). If academic TQM is to emerge as an agent of organizational reform, it is likely to come about more through faculty initiative than external pressure.

### HOW CAN THE GOVERNANCE AND FINANCE CONSIDERATIONS BE MANAGED?

As large sums of money are contemplated and eventually allocated for educational technology development, college and university boards face a number of daunting tasks (Krebs). First, boards must closely monitor regulatory legislation and actively participate in public policy debate. Distance education providers must stay abreast of federal and state regulations which often adversely affect the inter-state delivery of programs and services. Second, boards must establish a telecommunications policy and a strategic plan for its implementation. Third, boards must shepherd resources by defining genuine instructional needs and identifying appropriate technological solutions to fulfill them.

#### WHAT CONCLUSIONS AND RECOMMENDATIONS CAN BE DRAWN?

Colleges and universities are just now crossing the threshold between modest experimentation with and mainstream adoption of information technologies (El-Khawas 1995; Green 1996). Because of the serious repercussions reform efforts are already having on the academy, a number of conclusions and recommendations are warranted. Following are seven conclusions: (1) a paradigm shift can occur only in institutions committed to comprehensive reform; (2) attempts to change the classroom focus from "the sage on the stage" to collaborative learning are likely to fail without a substantial commitment to professional development; (3) higher education will continue to be market driven, requiring redoubled efforts to define academic productivity; (4) new constituencies appear to be well served by a variety of distance learning venues; (5) the TQM movement has made impressive inroads in higher education administration; however, very little penetration has occurred where it most matters=on the academic side of the institution; (6) even as instructional use of technology rises, institutional support for applications development has been dilatory; and (7) the historic commitment to core values in traditional undergraduate education has wavered; the same vacillation threatens to undermine general education requirements in electronically delivered certificate and degree programs.

In the absence of conclusive data with respect to wise technology choices and successful teaching/learning models, institutions must carefully prepare today for what is anticipated as a widespread integration of information into teaching, learning, and research. Following are seven recommendations for beginning this process of integration: (1) create a venue where key stakeholders can analyze major technology issues and purchases; (2) assert the value of technology-based learning from a variety of research perspectives; (3) establish quality standards for certificate and degree programs; (4) avoid pitting traditionalists against technology enthusiasts; (5) make collaboration and cooperation, not reengineering and restructuring, the new institutional buzzwords; (6) retain a strong commitment to adequate library staffing and funding; and (7) prepare for success by creating the necessary support structures.

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